

AMENDMENTS TO THE CLAIMS

Please add or amend the claims to read as follows, and cancel without prejudice or disclaimer to resubmission in a divisional or continuation application claims indicated as cancelled:

1. **(Currently Amended)** A medical device comprising:
 - a device housing sized for introduction into and residence completely within the body lumen;
 - a fixation mechanism to attach the device housing to a surface within the body lumen;
 - a controlled detachment mechanism mechanically actuating the fixation mechanism to selectively ~~self-detach~~ detach the device housing from the surface of the body lumen without endoscopic intervention; and
 - a controller responsive to a control signal, wherein the controller activates the controlled detachment mechanism, and wherein the medical device remains completely within the body lumen until after the device is detached from the surface.
2. (Original) The medical device of claim 1, wherein the fixation mechanism includes a cavity formed in the device housing and a shaft to capture luminal tissue within the cavity.
3. (Original) The medical device of claim 2, wherein the cavity includes a vacuum port for application of vacuum pressure to draw the tissue into the cavity.
4. (Original) The medical device of claim 2, wherein the fixation mechanism includes a spring to bias the shaft toward the tissue, and the detachment mechanism includes a solenoid

coil wound about the shaft and a circuit to energize the solenoid coil to drive the shaft against the spring bias and thereby release the luminal tissue.

5. (Original) The medical device of claim 4, wherein the circuit is responsive to a control signal to energize the solenoid coil.

6-16. (Cancelled)

17. (Original) The medical device of claim 1, further comprising a power source to power the detachment mechanism.

18. (Previously Presented) The medical device of claim 17, wherein the power source includes a battery.

19. (Previously Presented) The medical device of claim 17, wherein the power source includes an inductive coupling circuit to generate power from an inductive element external to the body lumen.

20. (Cancelled)

21. (Previously Presented) The medical device of claim 1, wherein the controller includes a telemetry circuit to receive the control signal as a telemetry signal from an external controller.

22. (Previously Presented) The medical device of claim 1, wherein the controller includes an inductive coupling circuit to sense the presence of an external inductive element as the control signal.

23. (Previously Presented) The medical device of claim 1, wherein the controller includes an inductive coupling circuit to generate power from an inductive element external to the body lumen and thereby drive the detachment mechanism with the generated power.

24. (Original) The medical device of claim 1, wherein the device housing is sized for introduction into the esophagus.

25. (Original) The medical device of claim 1, wherein the device housing is sized for passage through the gastrointestinal tract.

26. (Original) The medical device of claim 1, further comprising a sensor, mounted to the device housing, to sense at least one condition within the body lumen.

27. (Original) The medical device of claim 1, further comprising a sensor, mounted to the device housing, to sense at least one of pH, flow, temperature, and pressure within the body lumen.

28. (Original) The medical device of claim 1, further comprising:

an electrical pulse generator, mounted within the device housing, to generate an electrical stimulation waveform;

one or more electrodes electrically coupled to the electrical pulse generator and mounted to the device housing to deliver the electrical stimulation waveform to the body lumen.

29. **(Currently Amended)** A method for attaching and detaching a medical device within a body lumen of a patient, the method comprising:

positioning the medical device at a target location within the body lumen;

activating a fixation mechanism carried by the medical device to attach the medical device to a surface within the body lumen; and

activating the fixation mechanism with a controlled mechanically actuated detachment mechanism carried by the medical device to ~~self-detach~~ detach the medical device from the surface of the body lumen without endoscopic intervention, wherein the detachment mechanism is activated in response to receipt of a control signal from a controller external to the body lumen.

30. (Original) The method of claim 29, wherein the fixation mechanism includes a cavity formed in the device housing and a shaft to capture luminal tissue within the cavity, and activating the fixation mechanism includes advancing the shaft to capture the tissue.

31. (Original) The method of claim 30, wherein the cavity includes a vacuum port for application of vacuum pressure to draw the tissue into the cavity, and activating a fixation mechanism includes applying vacuum pressure to the vacuum port.

32. (Original) The method of claim 30, wherein the fixation mechanism includes a spring to bias the shaft toward the tissue, and the detachment mechanism includes a solenoid coil wound about the shaft, and activating the detachment mechanism includes energizing the solenoid coil to drive the shaft against the spring bias and thereby release the luminal tissue.

- 33-40. (Cancelled)

APPLICANT(S): DINSMOOR, David A et al.
SERIAL NO.: 10/813,307
FILED: March 30, 2004
Page 6

41. (Original) The method of claim 29, further comprising powering the detachment mechanism with a battery carried by the medical device.

42. (Original) The method of claim 29, further comprising powering the detachment mechanism with power generated by an inductive coupling circuit carried by the medical device in response to inductive energy generated by an inductive element external to the body lumen.

43. (Cancelled)

44. (Original) The method of claim 29, further comprising activating the detachment mechanism in response to presence of an external magnetic source.

45. (Original) The method of claim 29, further comprising positioning the medical device within the esophagus of the patient.

46. (Original) The method of claim 29, further comprising sensing at least one of pH, flow, temperature, and pressure within the body lumen with a sensor carried by the medical device.

47. (Original) The method of claim 29, further comprising:
generating an electrical stimulation waveform; and
delivering the electrical stimulation waveform to the tissue via one or more electrodes carried by the medical device.

48-66. (Cancelled)

67. (Previously Presented) A medical device comprising:
- a device housing sized for introduction into and residence completely within the body lumen;
 - a fixation mechanism to attach the device housing to a surface within the body lumen, wherein the fixation mechanism includes a spring to bias a shaft toward the tissue; and
 - a controlled detachment mechanism to selectively detach the device housing from the surface of the body lumen, wherein the detachment mechanism includes a solenoid coil wound about the shaft and a circuit to energize the solenoid coil to drive the shaft against the spring bias and thereby release the luminal tissue.
68. (Previously Presented) The medical device of claim 67, wherein the circuit is responsive to a control signal to energize the solenoid coil.